BASELINE CHANGE PROPOSAL (BCP)

1) BCP Number: CDF 002		2) BCP Title: Contingency Funding Reduction	
3) Budget Number:		4) Title: Run IIb CDF Detector Project	
5) Date Received (Field Office):		Date Received (Program Office):	
6) Change Designation: Contingency reduction	7) BCP Level: Level 0 [ ] Level 2 [ ] Level 1 [X] Level 3 [ ]	8) Directed Change? Yes [ ] No [X]	9) Program: SC-20, Office of High Energy Physics
10) Point of Contact: Paul Philp 11) Phone: (630) 840-4481		12) FAX: (630)840-3285 13) Location: FSO	

14) Change Description:

This change proposal will reduce the MIE contingency by $2.2 million from $3.2 million to $1.0 million. The total MIE funding will, thus, be reduced from $10.4 million to $8.2 million. This is possible due to value engineering revisions and completion of portions of the project significantly under estimated costs.

The project schedule and scope will not change due to this change proposal.

The following tables in the Project Execution Plan were revised. These revisions are attached to this BCP and approved via this BCP.

- Table 6.1, Planned Funding
- Table 7.3a, Cost Table
- Table 7.3b, Project Cost by WBS Element

15) Change Justification: (If Directed Change specify authority and documentation)

The project has reached a state where the contingency is significantly more than is expected to be needed by the project. Contingency needs for the balance of the project have been analyzed at the task level and funding to cover these projected needs will be retained. Reduction of the contingency funding would allow reprogramming of these funds into needed areas within the HEP program during FY2005.

16) Impact of Non-Approval:

Should this baseline change not be approved, the project would continue to hold a very large contingency, and these funds would be unavailable for other activities until the project is completed.

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17) Impact on DOE Cost Baseline:

	Baseline (Dec. 2003)	Baseline (May 2005)	Proposed	Change from May 2005
MIE Base ($M)	7.7	7.2	7.2	0.0
MIE Contingency ($M)	2.7	3.2	1.0	-2.2
Total MIE ($M)	10.4	10.4	8.2	-2.2

18) Impact on Funding Profile (BA):

The changes to the DOE MIE funding profile are shown below.

	Prior FY	FY04	FY05	FY06	Total
Baseline ($K)	6,969	1,673	1,732	0	10,374
Proposed ($K)	6,969	1,227	0	0	8,196
Change ($K)	0	-446	-1,732	0	-2,178

19) Explanation of Impact on Cost and Funding Baseline:

The project cost was significantly reduced by the completion of some portions of the project in FY 2004 at or below their estimated cost. In particular, the Silicon Detector Closeout was completed below cost, and the Calorimeter Upgrades were completed very near their estimate. Additional cost savings were obtained by value engineering revisions to the project. The most significant of these was the Time to Digital Converter (TDC) value engineering revision that resulted from an adoption of a new strategy for drift chamber readout at high luminosity. Finally, contingency needs were reevaluated based on the work remaining. Contingency for the project is estimated to be 36% of the Estimate to Complete($2.6M) after adoption of this change.

The major cost savings were:

- Silicon Closeout $0.3M
- TDC Value Engineering Revision $0.4M
- Contingency Analysis based on work remaining $1.5M

The breakdown between base costs and contingency for the project as a result of this change is given in the table below:

	Current($K)			After Change($K)		
	Base Cost	Cont.	Total	Base Cost	Cont.	Total
Silicon	1643	0	1643	1341	0	1341
Calorimeter	395	344	739	468	0	468
Data Acquisition	4640	2074	6714	4732	881	5613
Administration	964	315	1279	744	30	774
Total	7642	2733	10375	7285	911	8196

20) Impact on Schedule Baseline:

None.

Milestone (No. and Description)	Baseline (Month/Year)	Proposed (Month/Year)	Change
CD-4	11/06	11/06	0 weeks

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21) Explanation of Impact on Schedule Baseline: Not applicable.	
22) Impact on Scope Baseline: None.	
23) Explanation of Impact on Scope Baseline: Not applicable.	
24) Other Impacts (Health, Safety, Environment, etc.) None	
25) Interim or Corrective Actions: None.	

Run IIb CDF and D-Zero Detector Projects
Project Execution Plan Revisions

Table 6.1 (revised)
[Planned Funding]

Planned Funding (AY in thousands)						
	FY01	FY02	FY03	FY04	FY05	Total
Run IIb CDF Detector Project						
DOE MIE	**0**	**3,460**	**3,509**	**1,227**	**0**	**8,196**
DOE R&D	0	1,670	480	0	0	2,150
Foreign Contributions	0	39	518	234	404	1,195
U.S. Universities	0	24	225	103	26	378
Total*	**0**	**5,193**	**4,732**	**1,564**	**36**	**11,919**

Table 7.3a
Run IIb CDF and D-Zero Detector Projects
Revised Cost Table
($ in Thousands)

Control Level	Item	Cost
Run IIb CDF Detector Project		
1	**DOE MIE**	**8,196**
3	DOE R&D	2,150
3	Foreign Contributions	1,195
3	U.S. Universities	378
3	**TOTAL COST**	**11,919**

Table 7.3b
Run IIb CDF and D-Zero Detector Projects
Revised Project Cost by WBS Element
($ in Millions)

WBS Element	Item	Total Cost	DOE MIE
Run IIb CDF Detector Project			
1.1	Silicon Detector	3.5	1.3
1.2	Calorimeter Upgrades	1.2	0.5
1.3	Data Acquisition Upgrades	5.6	4.7
1.4	Administration	0.7	0.7
	Contingency	0.9	0.9
	TOTAL COST	**11.9**	**8.2**

BASELINE CHANGE PROPOSAL (BCP)

LABORATORY DISPOSITION - LEVEL 3	
Patrick Lukens Date Run IIb CDF Project Manager Fermi National Accelerator Laboratory	
Hugh Montgomery Date Associate Director Fermi National Accelerator Laboratory	
FIELD DISPOSITION - LEVEL 2	
26) Members	Recommendations
Paul Philp Date Run II Project Director Fermi Site Office	
Joanna Livengood Date Fermi Site Office Manager	
PROGRAM DISPOSITION - LEVEL 1	
27) Advisors (Specialized Support, as required)	Recommendations
Michael Procario Date Run IIb Program Manager Office of High Energy Physics	
ACQUISITION EXECUTIVE - LEVEL 1	
Disposition [ ] Approved [ ] Endorsed [ ] Rejected	Comments:
Robin Staffin Date Associate Director Office of High Energy Physics	